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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,341	01/26/2001	Indru J. Primlani		6794

7590 09/22/2004

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EXAMINER

BHAT, NINA NMN

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/771,341

Applicant(s)

PRIMLANI, INDURU J.

Examiner

N. Bhat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 5-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-9 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All- b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicant's election without traverse of Group I, a claim 1-2, in the reply filed on 9-10-2004 is acknowledged. The restriction election requirement is hereby made FINAL.

2. Claims 3-4 have been withdrawn. Action on the merits of claims 1-2 and 5-9 follows:

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-2 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tucker.

Tucker teaches the invention substantially as claimed. Tucker teaches an oxyhydrogen steam generator, which provides using the intense heat, generated of an oxyhydrogen flame resulting from burning hydrogen and oxygen, which is used in

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producing steam or other vaporized liquid. The oxyhydrogen flame produced under pressure in the combustion chamber of a generator and operates upon water when the water is sprayed the amount of water is proportioned the amount of heat that the oxyhydrogen flame provides. [Note page 1, lines 10-47 and lines 90-110] Tucker teaches in Figure 1, a boiler in which the oxyhydrogen flame impinges on water to vaporize the water to produce steam. Essentially the boiler consists of a perforated shell through the perforation of which the water is forced under pressure into the interior of the shell where it is met by the vaporizing flame that also enters the interior of the shell through the wall at one or more points. The perforations or apertures are arranged radially around the shell and directed toward the flame also the gas entrance allows the exact amount of combustible material and combustion supporting medium for perfect combustion to be introduced. The perforated shell may be arranged radially or fanwise, the water is forced through the holes or perforations to form needle jets, which will be in an atomized or finely subdivided condition and ready to be attached by the combustible gas. The shell further includes a refractory or noncombustible lining.[Note Page 2, lines 15 et seq.]

However, Tucker does not teach a device to mitigate deposition of mineral salts as claimed.

Tucker teaches providing a oxyhydrogen steam generator which includes a housing which forms a chamber capable of maintaining a high pressure, means to providing an oxyhydrogen frame, a perforated shell which provides needle jets when water is supplied to the boiler, discharge nozzle for discharging steam and gas inlet

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means for introducing hydrogen and oxygen and/or air into the flame to generate the oxyhydrogen flame. Tucker teaches that the boiler is insulated with refractory and further includes temperature, and pressure as well as gas regulating means for controlling the flame and pressure within the boiler. Tucker further teaches that although hydrogen and oxygen are the preferred type of gases to be used for the oxyhydrogen flame, other types of gases can be used which would suggest to one having ordinary skill in the art that other gases such as hydrogen peroxide could be substituted for the hydrogen and oxygen if desired and is an obvious design choice. With respect to providing means which mitigate deposition of mineral salts, this modification would have been obvious to one having skill in the art as reactor or boiler fouling is a well recognized problem and to provide means for cleaning or mitigating fouling or mineral build up in steam generators and boilers, to include antifouling means would have been obvious to one having ordinary skill in the art, further to include antifouling means so that the heat transfer and overall efficiency of a boiler is achieved would have been obvious to one having ordinary skill in the art at the time the invention was made thus rendering the invention as a whole obvious.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brown teach a welding apparatus, which uses hydrogen oxygen, generated in substantially stoichiometric proportions in an electrolytic cell by the dissociation of water. Rhodes et al. teach an apparatus for the electrolytic production of hydrogen and oxygen for the safe consumption thereof. Rhodes teach a multicell oxyhydrogen generator.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). )



N. Bhat  
Primary Examiner  
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